

## SEQUENCE LISTING

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Met ctc Leu aaa Lys	ggc Gly tgg Trp ttc Phe	ttc Phe ttg Leu atg Met	tct Ser -5 tcc Ser	Met -20 ggt Gly aca Thr	Glu gtt Val tca Ser	gac Asp gta Val	gga Gly -1 gga Gly	Phe gac Asp 1 gac Asp	Leu -15 att Ile agg Arg	Val gtg Val gtc Val	Phe atg Met agc Ser 20	Val acc Thr 5 atc	Phe cag Gln acc Thr	Val -10 tct Ser tgc Cys	Phe cac His aag Lys	96 144
Met ctc Leu aaa Lys gcc	ggc Gly tgg Trp ttc Phe 10	ttc Phe ttg Leu atg Met	tct Ser -5 tcc Ser	Met -20 ggt Gly aca Thr	Glu gtt Val tca Ser	gac Asp gta Val 15	gga Gly -1 gga Gly gct	gac Asp 1 gac Asp	Leu -15 att Ile agg Arg	Val gtg Val gtc Val	Phe atg Met agc Ser 20 tat	Val acc Thr 5 atc Ile	Phe cag Gln acc Thr	Val -10 tct Ser tgc Cys	Phe cac His aag Lys	96
Met ctc Leu aaa Lys gcc Ala	ggc Gly tgg Trp ttc Phe 10	ttc Phe ttg Leu atg Met	tct Ser -5 tcc Ser	Met -20 ggt Gly aca Thr	Glu gtt Val tca Ser aat Asn	gac Asp gta Val 15	gga Gly -1 gga Gly gct	gac Asp 1 gac Asp	Leu -15 att Ile agg Arg	Val gtg Val gtc Val tgg Trp	Phe atg Met agc Ser 20 tat	Val acc Thr 5 atc Ile	Phe cag Gln acc Thr	Val -10 tct Ser tgc Cys	Phe cac His aag Lys cca Pro	96 144
Met ctc Leu aaa Lys gcc Ala 25	ggc Gly tgg Trp ttc Phe 10 agt Ser	ttc Phe ttg Leu atg Met	tct Ser -5 tcc Ser gat Asp	Met -20 ggt Gly aca Thr gtg Val	Glu gtt Val tca Ser aat Asn 30	gac Asp gta Val 15 act	gga Gly -1 gga Gly gct	gac Asp 1 gac Asp gta Val	Leu -15 att Ile agg Arg gcc Ala	Val gtg Val gtc Val tgg Trp 35	Phe atg Met agc Ser 20 tat Tyr	Val acc Thr 5 atc Ile caa Gln	Phe cag Gln acc Thr caa Gln	Val -10 tct Ser tgc Cys aaa Lys	Phe cac His aag Lys cca Pro 40	96 144 192
Met ctc Leu aaa Lys gcc Ala 25 gga	ggc Gly tgg Trp ttc Phe 10 agt Ser	ttc Phe ttg Leu atg Met cag Gln tcg	tct Ser -5 tcc Ser gat Asp	Met -20 ggt Gly aca Thr gtg Val	gtt Val tca Ser aat Asn 30	gac Asp gta Val 15 act Thr	gga Gly -1 gga Gly gct Ala	Phe gac Asp gac Asp gta Val	Leu -15 att Ile agg Arg gcc Ala	yal gtg Val gtc Val tgg Trp 35 gca	Phe atg Met agc ser 20 tat Tyr tcc	Val acc Thr 5 atc Ile caa Gln aac	Phe cag Gln acc Thr caa Gln	Val -10 tct Ser tgc Cys aaa Lys	Phe cac His aag Lys cca Pro 40 act	96 144
Met ctc Leu aaa Lys gcc Ala 25 gga	ggc Gly tgg Trp ttc Phe 10 agt Ser	ttc Phe ttg Leu atg Met cag Gln tcg	tct Ser -5 tcc Ser gat Asp	Met -20 ggt Gly aca Thr gtg Val	gtt Val tca Ser aat Asn 30	gac Asp gta Val 15 act Thr	gga Gly -1 gga Gly gct Ala	Phe gac Asp gac Asp gta Val	Leu -15 att Ile agg Arg gcc Ala	yal gtg Val gtc Val tgg Trp 35 gca	Phe atg Met agc ser 20 tat Tyr tcc	Val acc Thr 5 atc Ile caa Gln aac	Phe cag Gln acc Thr caa Gln	Val -10 tct Ser tgc Cys aaa Lys	Phe cac His aag Lys cca Pro 40 act	96 144 192

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Phe	Thr	Ile	Ser	Ser	Val	Gln	Ala	Glu	Asp	Leu	Ala	Leu	Tyr	Tyr	Cys		
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Gln	Gln	His	Tyr	Ser	Thr	Pro	Phe	Thr	Phe	Gly	Ser	Gly	Thr	Lys	Leu	•	
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gaa	ata	aaa	c												•	39	4
Glu	Ile	Lys															
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Lys	Phe	Met	Ser	Thr	Ser	Val	Gly	Asp	Arg	Val	Ser	Ile	Thr	Cys	Lys		
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Ala	Ser	Gl'n	Asp	Val	Asn	Thr	Ala	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro		
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Gln	Gln	His	Tyr	Ser	Thr	Pro	Phe	Thr	Phe	Gly	Ser		Thr	Lys	Leu		
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GLu	Ile	Lys														
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gcc	tac	tca	cag	gtt	caa	ctc	cag	cag	tct	ggg	gct	gag	ctg	gca	aga	96
Ala	Tyr	Ser	Gln	Val	Gln	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Ala	Arg	
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Pro		Ala	Ser	Val	Lys	Leu	Ser	Cys	Lys	Ala		Gly	Tyr	Thr	Phe	
	15					20					25					
						tgg 										192
30	PIO	TYE	Trp	met	35	Trp	vaı	гÃа	GIN		Pro	стА	GIN	GTĀ	45	
	+ ~ ~	2++	~~~	tat		ttt	aa+		~~+	40 aat	~~+	-a+	200	+20		240
						Phe										240
			1	50				021	55	011			9	60		
cag	aag	ttc	aag		aag	gcc	aca	ttg		gca	gat	aaa	tcc		agt	288
						Ala										
			65					70					75			
aca	gcc	tac	atg	caa	ctc	agc	atc	ttg	gca	ttt	gag	gac	tct	gcg	gtc	. 336
Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ile	Leu	Ala	Phe	Glu	Asp	Ser	Ala	Val	
		80					85					90				
tat	tac	tgt	gca	aga	gga	tta	cga	cga	ggg	ggg	tac	tac	ttt	gac	tac	384
Tyr	Tyr	Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr	

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<212> PRT

<213> Mouse

<223> Amino acid sequence of H chain V region of mouse anti-HM1.24 antibody

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Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
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Thr Pro Tyr Trp Met Gln Trp Val Lys Gln Arg Pro Gly Gln Gly Leu 30 35 40 45

Glu Trp Ile Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser

50 55 60

Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser 65 70 75

Thr Ala Tyr Met Gln Leu Ser Ile Leu Ala Phe Glu Asp Ser Ala Val 80 85 90

Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr
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Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser 110 115 120

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<213> Artificial Sequence

<220> CDR(1) of L chain V region of anti-HM1.24 antibody

<223>

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<210> 6

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<223>

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1 5

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<220> DNA coding for humanized L chain V region of
 anti-HM1.24 antibody

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gtc	cac	tcc	gac	atc	cag	atg	acc	cag	agc	cca	agc	agc	ctg	agc	gcc	96
Val	His	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	
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Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Val	
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aat	act	gct	gta	gcc	tgg	tac	cag	cag	aag	cca	gga	aag	gct	cca	aag	192
Asn	Thr	Ala	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	
30					35			-		40					45	
ctg	ctg	atc	tac	tcg	gca	tcc	aac	cgg	tac	act	ggt	gtg	cca	agc	aga	240
Leu	Leu	Ile	Tyr	Ser	Ala	Ser	Asn	Arg	Tyr	Thr	Gly	Val	Pro	Ser	Arg	
				50					55					60		
ttc	agc	ggt	agc	ggt	agc	ggt	acc	gac	ttc	acc	ttc	acc	atc	agc	agc	288
Phe	Ser	${\tt Gly}$	Ser	$\mathtt{Gl}_{\mathtt{Y}}$	Ser	Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile	Ser	Ser	
			65					70					75			
ctc	cag	cca	gag	gac	atc	gct	acc	tac	tac	tgc	cag	caa	cat	tat	agt	336
Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	His	Tyr	Ser	
		80					85					90				
act	cca	ttc	acg	ttc	ggc	caa	ggg	acc	aag	gtg	gaa	atc	aaa	C		379
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<213> Artificial Sequence

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<220> Humanized L chain V region of anti-HM1.24 antibody <223>

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Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala  -1 1 5 10  Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val  15 20 25  Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys  30 35 40 45  Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg  50 55 60  Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser  65 70 75  Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser  80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  95 100 105  <210> 13  <211> 379  <212> DNA  <221> DNA coding for humanized L Chain V region of anti-HM1.24 antibody  <223>  <400> 13  atg gga tgg agc tgt atc atc ctc tcc ttg gta gca aca gct aca ggt  Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly  -15 -10 -5  gtc cac tcc gac atc cag atg acc cag agc cca agc ctg agc gcc	Met Gly Trp Ser	Cys Ile Ile	Leu Ser Leu Val	Ala Thr Ala Thr Gly
-1 1 5 10  Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val 15 20 25  Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 30 35 40 45  Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg 50 55 60  Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser 65 70 75  Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser 80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 95 100 - 105 <a href="#">&lt;210&gt; 13</a> <210> DNA coding for humanized L chain V region of anti-HM1.24 antibody  <223> <a href="#">&lt;220&gt; DNA coding for humanized Leu Ser Leu Val Ala Thr Ala Thr Gly Leu Ser Leu Val Ala Thr Ala Thr Gly Leu Ser Leu Val Ala Thr Ala Thr Gly Leu Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly Leu Cac tee gae ate cag atg ace cag age ctg age ccc age ctg age ccc</a>		-15	-10	-5
Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val  15	Val His Ser Asp	Ile Gln Met	Thr Gln Ser Pro	Ser Ser Leu Ser Ala
Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys 30	-1 1		5	10
Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys  30	Ser Val Gly Asp	Arg Val Thr	Ile Thr Cys Lys	Ala Ser Gln Asp Val
10 35 40 45  Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg 50 55 60  Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser 65 70 75  Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser 80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 95 100 - 105 <a href="#"></a> <a href="#"><a href="#"><a< td=""><td>15</td><td>20</td><td></td><td>25</td></a<></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a>	15	20		25
Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg 50	Asn Thr Ala Val	Ala Trp Tyr	Gln Gln Lys Pro	Gly Lys Ala Pro Lys
So   So   The Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser   65   70   75	30	35	40	45
Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser  65 70 75  Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser  80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  95 100 - 105  <210> 13  <211> 379  <212> DNA  <213> Artificial Sequence  <220> DNA coding for humanized L chain V region of anti-HM1.24 antibody  <223>  <400> 13  atg gga tgg agc tgt atc atc ctc tcc ttg gta gca aca gct aca ggt Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly  -15 -10 -5  gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc	Leu Leu Ile Tyr	Ser Ala Ser	Asn Arg Tyr Thr	Gly Val Pro Ser Arg
Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser 80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 95 100 - 105  <210> 13 <211> 379 <212> DNA <213> Artificial Sequence  <220> DNA coding for humanized L chain V region of anti-HM1.24 antibody <223>  <400> 13 atg gga tgg agc tgt atc atc ctc tcc ttg gta gca aca gct aca ggt Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly -15 -10 -5 gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc				
Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser  80 85 90  Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 95 100 - 105   C210> 13  C211> 379  C212> DNA  C213> Artificial Sequence  C220> DNA coding for humanized L chain V region of anti-HM1.24 antibody  C223>  C400> 13  atg gga tgg age tgt ate ate ete tee ttg gta gea aca get aca ggt Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly  15 -10 -5  gte cae tee gae ate cag atg ace cag age cea age ctg age gee	_	Gly Ser Gly	_	
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<pre>&lt;210&gt; 13 &lt;211&gt; 379 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; DNA coding for humanized L chain V region of anti-HM1.24 antibody &lt;223&gt; &lt;400&gt; 13 atg gga tgg agc tgt atc atc ctc tcc ttg gta gca aca gct aca ggt Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly -15</pre>		_	Gly Thr Lys Val	-
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atg gga tgg age tgt atc atc etc tec ttg gta gca aca get aca ggt  Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly  -15 -10 -5  gte cae tee gae ate cag atg ace cag age cea age age etg age gee	<223>			
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Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly -15 -10 -5  gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc	<400> 13			•
-15 -10 -5 gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc		_		
gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc	Met Gly Trp Ser	Cys Ile Ile	Leu Ser Leu Val	Ala Thr Ala Thr Gly
		-15	-10	<b>-5</b>
Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala	gtc cac tcc gac	atc cag atg	acc cag agc cca	age age etg age gee
	Val His Ser Asp	Ile Gln Met	Thr Gln Ser Pro	Ser Ser Leu Ser Ala

age gtg ggt gae aga gtg ace ate ace tgt aag get agt eag gat gtg Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val

20

15

48

96

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Asn	Thr	Ala	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	
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Leu	Leu	Ile	Tyr	Ser	Ala	Ser	Asn	Arg	Tyr	Thr	Gly	Val	Pro	Ser	Arg	
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ttc	agc	ggt	agc	ggt	agt	ggt	acc	gac	tac	acc	ttc	acc	atc	agc	agc	288
Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	
			65					70					75	5		
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Leu	Gln	Pro	Glu	Asp	Ile	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	His	Tyr	Ser	
		80					85					90				
act	cca	ttc	acg	ttc	ggc	caa	ggg	acc	aag	gtg	gaa	atc	aaa	C		379
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Val	His	Ser	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	
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Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Val	
	15					20					25				•	
Asn	Thr	Ala	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	
30					35					40					45	
Leu	Leu	Ile	Tyr	Ser	Ala	Ser	Asn	Arg	Tyr	Thr	Gly	Val	Pro	Ser	Arg	
				50					55					60		
Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Tyr	Thr	Phe	Thr	Ile	Ser	Ser	
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Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser 80 85 90

Thr Pro Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 95 100 105

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<220> DNA coding for humanized H chain V region(version a)
 of anti-HM1.24 antibody

<223>

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90

Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val



384 tat tac tgt gcg aga gga tta cga cga ggg ggg tac tac ttt gac tac Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr

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<210> 16 <211> 139 <212> PRT <213>

Artificial Sequence

<220> Humanized H chain V region(version a) of anti-HM1.24 antibody

<223>

<400> 16

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Ala His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys 1 5 10

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe 20

Thr Pro Tyr Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu 35

Glu Trp Met Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser 50

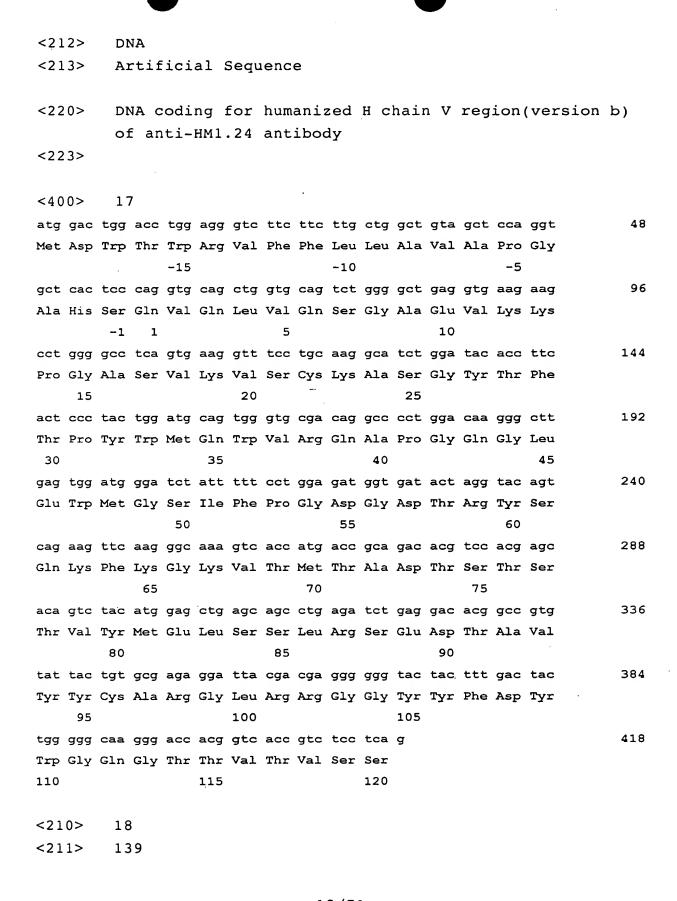
Gln Lys Phe Lys Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser 70

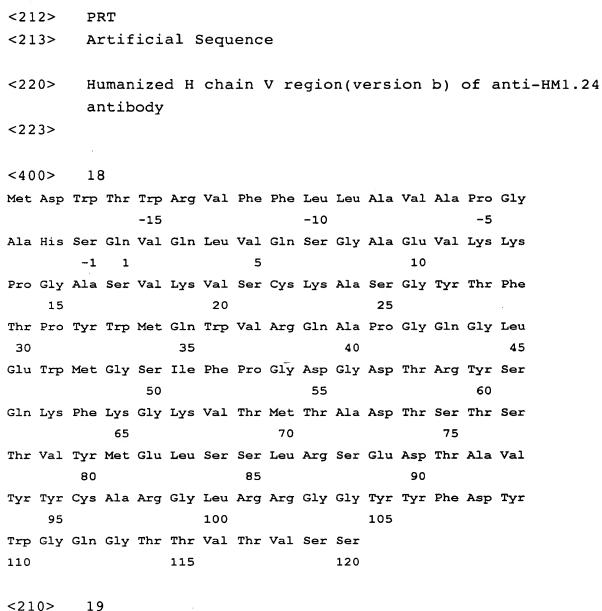
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Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr 100

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser 110 115 120

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<223>

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gct	cac	tcc	cag	gtg	cag	ctg	gtg	cag	tct	ggg	gct	gag	gtg	aag	aag	96
Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
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cct	ggg	gcc	tca	gtg	aag	gtt	tcc	tgc	aag	gca	tct	gga	tac	acc	ttc	144
Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	
•	15					20					25					
act	ccc	tac	tgg	atg	cag	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt	192
Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
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Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser	
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cag	aag	ttc	aag	ggc	aga	gtc	act	atg	acc	gca	gac	aag	tcc	acg	agc	288
Gln	Lys	Phe	Lys	Gly	Arg	Val	Thr	Met	Thr	Ala	Asp	Lys	Ser	Thr	Ser	
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aca	gtc	tac	atg	gag	ctg	agc	agc	ctg	aga	tct	gag	gac	acg	gcc	gtg	336
Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	
		80					85					90				
											tac			_		384
Tyr	ΤΆτ	Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr	
	95					100					105					
tgg	ggg	caa	<b>3</b> 33	acc	acg	gtc	acc	gtc	tcc	tca	g					418
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Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys		
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Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
	15					20					25						
Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln		Pro	Gly	Gln	Gly	Leu		
30					35					40					45		
Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly		Gly	Asp	Thr	Arg	Tyr	Ser		
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Gln	Lys	Phe		Gly	Arg	Val	Thr		Thr	Ala	Asp	Lys	Ser	Thr	Ser		
			65					70					75				
Thr	Val		Met	Glu	Leu	Ser		Leu	Arg	Ser	Glu		Thr	Ala	Val		
		80					85					90					
Tyr	_	Cys	Ala	Arg	Gly		Arg	Arg	Gly	Gly		Tyr	Phe	Asp	Tyr		
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	GLY	Gln	Gly	Thr		Val	Thr	Val	Ser								
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	J.	• • •			~ L	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		•									
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122	U P				-			ibod		0.			- 0 5.		, , , , , , , , , , , , , , , , , , , ,		,
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~22	J/																
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													Ala		•		
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act	cac	tcc	caσ		cao	cta	ata	cag	tct	aaa	act	gag	gtg	aaq	aaq		96
-			_		_	-		_			_		Val	_	_		
		-1	1				5			-		10		-	-		
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													Tyr				
	15				-	20		_	-		25	_					

																100
							gtg									192
	Pro	Tyr	Trp	Met		Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
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cag	aag	ttc	aag	ggc	aaa	gtc	acc	atg	acc	gca	gac	aag	tcc	acg	agc	288
Gln	Lys	Phe	Lys	${\tt Gly}$	Lys	Val	Thr	Met	Thr	Ala	Asp	Lys	Ser	Thr	Ser	
			65					70					75			
aca	gtc	tac	atg	gag	ctg	agc	agc	ctg	aga	tct	gag	gac	acg	gcc	gtg	336
Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	
		80					85					90				
tat	tac	tgt	gcg	aga	gga	tta	cga	cga	ggg	ggg	tac	tac	ttt	gac	tac	384
Tyr	Tyr	Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr	
	95					100					105					
tgg	ggg	caa	ggg	acc	acg	gtc	acc	gtc	tcc	tca	g					418
						-	Thr	_			-					
110	-		-		115					120						
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Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
		-1	1				5			_		10		_	_	
Pro	Glv	Ala	Ser	Val	Lvs	Val	Ser	Cvs	Lvs	Ala	Ser		Tvr	Thr	Phe	
	15				-1 -	20		-1-	1 -		25	1	-1-			
Thr		Tvr	Tro	Met	Gln		Val	Ara	Gln	Ala		Glv	Gln	Glv	T.em	
30		-1-			35			9		40		1		1	45	
_	Т~~	Me+	Glu	Se.~		Dha	Pro	Gl••	A 65		λοπ	ሞb∽	A	Фз∙∽		
Gru	TTP	17 <del>0</del> C	GTÄ		116	FIIG	£10	GTĀ	_	GTA	vah	TILL	ALG.	_	Set	
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Gln Lys P	he Lys Gly	Lys Val			Asp Lys		Ser
m1 **-3 m	65	T 0 -	70		<b>a.</b> .	75	
Thr Val 1	yr Met Glu	Leu Ser		Arg Ser	_		Val
	80	. 01 7	85	G1 G1	90		
	ys Ala Arg		Arg Arg	GIA GIA		Phe Asp	Tyr
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	of anti-	HM1.24	antiboo	dy			
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	-15			-10		-5	
gct cac t	cc cag gtg	cag ctg	gtg cag	tct ggg	gct gag	gtg aag	aag 96
Ala His S	er Gln Val	Gln Leu	Val Gln	Ser Gly	Ala Glu	Val Lys	Lys
	-1 1		5		10		
cct ggg g	cc tca gtg	aag gtt	tcc tgc	aag gca	tct gga	tac acc	ttc 144
Pro Gly A	la Ser Val	Lys Val	Ser Cys	Lys Ala	Ser Gly	Tyr Thr	Phe
15		20			25		
act ccc t	ac tgg atg	cag tgg	gtg cga	cag gcc	cct gga	caa ggg	ctt 192
Thr Pro T	yr Trp Met	Gln Trp	Val Arg	Gln Ala	Pro Gly	Gln Gly	Leu
30		35		40			45
gag tgg a	tg gga tct	att ttt	cct gga	gat ggt	gat act	agg tac	agt 240
Glu Trp M	et Gly Ser	Ile Phe	Pro Gly	Asp Gly	Asp Thr	Arg Tyr	Ser
	50			55		60	
cag aag t	tc aag ggc	aga gcc	acc ctg	acc gca	gac acg	tcc acg	agc 288
Gln Lys P	he Lys Gly	Arg Ala	Thr Leu	Thr Ala	Asp Thr	Ser Thr	Ser
	65		70		•	75	

aca gtc	tac atg	gag cto	agc ago	ctg	aga tct	gag gad	acg gc	gtg	336
Thr Val	Tyr Met	Glu Leu	Ser Se	Leu	Arg Ser	Glu Asp	Thr Ala	a Val	
	80		85	5		90	)		
tat tac	tgt gcg	aga gga	tta cga	a cga	aaa aaa	tac tac	ttt gad	tac	384
Tyr Tyr	Cys Ala	Arg Gly	Leu Ar	, Arg	Gly Gly	Tyr Tyr	Phe Asp	Tyr	
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tgg ggg		_	_			g			418
Trp Gly	Gln Gly	Thr Thr	Val Thi	. Val	Ser Ser				
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	-1 1		5	•		10			
Pro Gly	Ala Ser	Val Lys	Val Ser	Cys :	Lys Ala	Ser Gly	Tyr Thr	Phe	
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	Pro	Tyr	Trp	Met		Trp	Val	Arg	Gln		Pro	Gly	Gln	Gly		
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GLu	Trp	Met	GTĀ		He	Phe	Pro	GTA	Asp	GIĀ	Asp	Thr	Arg		Ser	
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_	_		_		_	_		_	act	-	_	_		_	•	288
GIII	гуз	Pne	65	GTĀ	Arg	AIA	Int	70	Thr	Ата	Asp	Inr		ser	ser	
202	acc	tac		asa	cta	200			aga	tot	asa.	<b>G2G</b>	75	acc	ata	336
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Glu Trp Met Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser
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Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val 80 85 90

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Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Суз	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
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Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Arg	Pro	Gly	Gln	Gly	Leu		
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Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser		
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Gln	Lys	Phe	Lys	Gly	Arg	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Thr	Ser		
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Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val		
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Tyr		Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr		
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Glu Trp Met Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser	
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Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe	
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Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
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Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	GJĀ	Asp	Thr	Arg	Tyr	Ser	
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Gln	Lys	Phe	Lys	Gly	Lys	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Ser	Ser	
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Thr	Ala	-	Met	Glu	Leu	Ser		Leu	Arg	Ser	Glu	_	Thr	Ala	Val	
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~a+	cac	t-0.0	~~~	-	~~~	a+a	~+ <i>~</i>	<b>~~</b>		~~~	aat	~~~	ata		330	96
	His		_		_	_		_			-			_		,
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	Gly	_			_	•		_	_	_						
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	Gly Lys Val Thr Met		
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7.7	Glu Leu Ser Ser Leu		
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	Arg Gly Leu Arg Arg	•	
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Tyr	Tyr 95	Суз	Ala	Arg	Gly	Leu 100	Arg	Arg	Gly	Gly	Tyr 105	Tyr	Phe	Asp	Tyr	
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Ala	His			Val	Gln	Leu	Val	Gln	Ser	Gly	Ala		Val	Lys	Lys	
cct	<b>~</b> ~~	-1	1	ata	220	at t	5 tcc	tac	224	ac.	tat	10	<b>t</b> ac	200	++0	144
							Ser									
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act	ccc	tac	tgg	atg	cag	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt	192
Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
30					35					40					45	
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Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser	
				50					55					60		
_	_		_			-	acc	•		-	-	_		_	-	288
GIN	гÀг	Phe	_	GŢĀ	Lys	Ala	Thr	Leu 70	Thr	ALA	Asp	Thr	Ser 75	Ser	ser	
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90





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						ttt										240	D
GIU	Trp	Met	GTA		lie	Phe	Pro	GTĀ		GTĀ	Asp	Thr	Arg		Ser		
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GIII	гу	File	65	GIĀ	гАг	Val	Inr	70	THE	Ата	Asp	Thr	75	ser	ser		
202	acc	tac		C2C	cta	agc	200		3.63	tat	~~~	<b>420</b>		<b>700</b>	a+a	33	_
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		80		02	204	501	85	Lea	9	Jer	914	90		71.24	V 4.1		
tat	tac		aca	aga	gga	tta		cga	aaa	aaa	tac		ttt	gac	tac	384	4
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•	- 95	-,		_	-	100		3			105	- 4		•	-4-		
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Artificial Seam

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Glu Trp Met Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser

Gln Lys Phe Lys Gly Lys Val Thr Met Thr Ala Asp Thr Ser Ser Ser 65 70 75

Thr Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val 80 85 90

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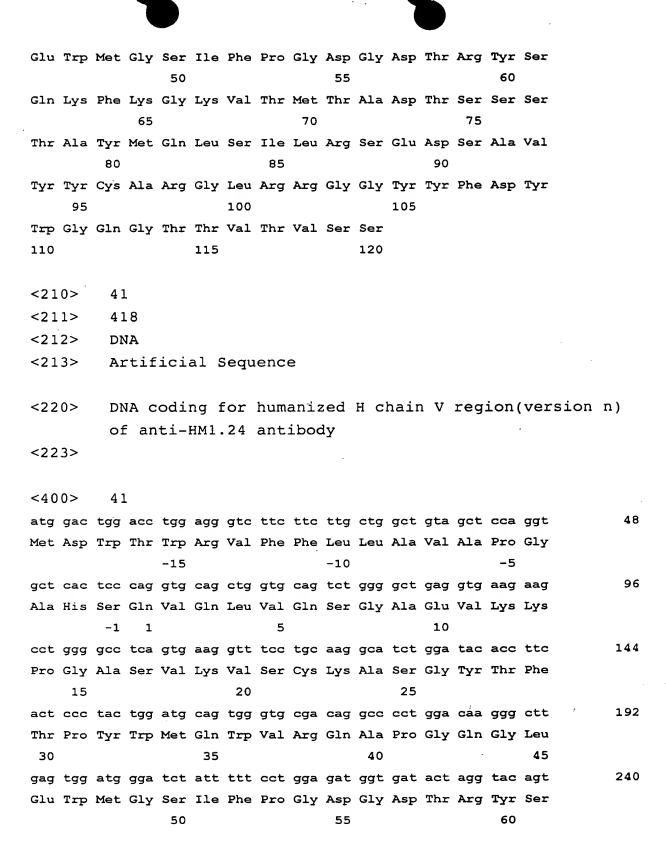
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Ala Hi	s Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
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cct gg	g gcc	tca	gtg	aag	gtt	tcc	tgc	aag	gca	tct	gga	tac	acc	ttc	144
Pro Gl	y Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	
1	5				20					25					
act cc	c tac	tgg	atg	cag	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt	192
Thr Pr	o Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
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gag tg	g atg	gga	tct	att	ttt	cct	gga	gat	ggt	gat	act	agg	tac	agt	240
Glu Tr	o Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser	
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cag aa		-			-		-		-		_		_	_	288
Gln Ly	s Phe	_	Gly	Lys	Val	Thr		Thr	Ala	Asp	Thr		Ser	Ser	
		65					70					75			
aca gc		_	_	_	_		_	_			_	_	_		336
Thr Ala	_	Met	Gin	Leu	Ser		Leu	Arg	Ser	GIu	_	Thr	Ala	Val	
	80					85				•	90				204
tat ta	_		_			_	_						_		384
Tyr Ty:	-	Ата	Arg	GIA	100	Arg	Arg	GTĀ	GTĀ	105	TYP	Pne	Asp	TYP	
		~~~	200	200		200	a+a	taa	<b>+ a a</b>						418
tgg ggg				_	_		_			g					410
110	, 0111	Cly	****	115	<b>V</b> 41		V 441	561	120						
110									120						
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Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser	
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Gln	Lys	Phe	Lys	Gly	Lys	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Ser	Ser	
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Thr	Ala	Tyr	Met	Gln	Leu	Ser	Ile	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	
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Tyr	Tyr	Cys	Ala	Arg	Cly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr	
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	•	-		-15	_				-10		-			-5	4	
act	cac	tee	cag		cag	ctg	ata	caσ		aaa	act	gag	ata	_	aac	9
						Leu								_	_	J.
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aat	gaa	_		ata	aar	gtt	_	tac	aac	ace	tot		tac	200	ttc	14
					_	Val		_	_	_						7-4.
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25

act	ccc	tac	tgg	atg	cag	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt		192
Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu		
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Glu	Trp	Met	Gly		Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser		
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									acc		_	_		_	_		288
Gln	Lys	Phe	_	Gly	Lys	Val	Thr		Thr	Ala	Asp	Thr		Ser	Ser		
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Thr	Ala		Met	GIn	Leu	Ser		Leu	Arg	Ser	Glu		Ser	Ala	Val		
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									ggg								384
TĀT	95	cys	AIA	Arg	GIĀ	100	Arg	Arg	Gly	GIĀ	1yr 105	ıyr	Pne	Asp	lyr		
taa		<b>C22</b>	~~~	300	200		200		tcc	+							418
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Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys		
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Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
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Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu		
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cag aag	ttc	aag	ggc	aaa	gtc	acc	atg	acc	gca	gac	acg	tcc	tcg	agc		288
Gln Lys	Phe	Lys	Gly	Lys	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Ser	Ser		
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aca gcc	tac	atg	gag	ctg	agc	atc	ctg	aga	tct	gag	gac	acg	gcc	gtg		336
Thr Ala	Tyr	Met	Glu	Leu	Ser	Ile	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val		
	80					85					90					
tat tac	tgt	gcg	aga	gga	tta	cga	cga	ggg	ggg	tac	tac	ttt	gac	tac		384
Tyr Tyr	Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr		
95					100					105						
tgg ggg				_	_		_			g						418
Trp Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser							
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tat tac tgt gcg aga gga tta cga cga ggg ggg tac tac ttt gac tac

Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr

95

100

105

tgg ggg caa ggg acc acg gtc acc gtc tcc tca g

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser

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Ala His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
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Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
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Thr Pro Tyr Trp Met Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
30 35 40 45

Glu Trp Met Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser

50 55 60

Gln Lys Phe Lys Gly Lys Val Thr Met Thr Ala Asp Thr Ser Ser Ser 65 70 75

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Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr 95 100 105

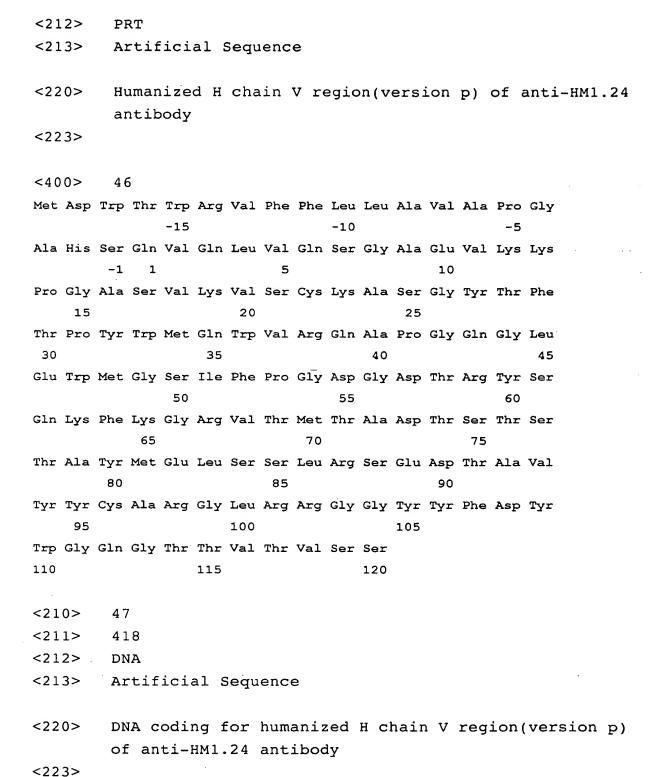
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	of anti-	-HM1.24 ar	ntibody			
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Met Asp		_		Leu Ala Val		Gly
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				ggg gct gag		
Ala His	-1 1	L GIN Leu Va	s Gin Ser	Gly Ala Glu	•	Lys
cet aga		a aag gtt to		gca tot gga		ttc 144
				Ala Ser Gly		
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act ccc	tac tgg ato	g cag tgg gt	g cga cag	gcc cct gga	caa ggg	ctt 192
				Ala Pro Gly		
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gag tgg	atg gga tct	att ttt co	t gga gat	ggt gat act	agg tac	agt 240
Glu Trp	Met Gly Ser	Ile Phe Pr	o Gly Asp	Gly Asp Thr	Arg Tyr	Ser
	50	)	55		60	
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Gln Lys		Arg Val Th		Ala Asp Thr		Ser
	65		70	<b>.</b>	75	336
				tct gag gad Ser Glu Asp		
IIII AIA	80		st bed Arg	ser Gru Asp		Val
tat tac				ggg tac tac		tac 384
				Gly Tyr Tyr		
95		100		105		
tgg ggg	caa ggg acc	acg gtc ac	e gte tee	tca g		418
Trp Gly	Gln Gly Thr	Thr Val Th	r Val Ser	Ser		
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Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys		
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cct	ggg	gcc	tca	gtg	aag	gtt	tcc	tgc	aag	gca	tct	gga	tac	acc	ttc		144
Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe		
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act	ccc	tac	tgg	atg	cag	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt		192
Thr	Pro	Tyr	Trp	Met	Gln	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu		
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gag	tgg	atg	gga	tct	att	ttt	cct	gga	gat	ggt	gat	act	agg	tac	agt		240
Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser		
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Gln	Lys	Phe	Lys	Gly	Arg	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Ser	Ser		
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	_		_		_	_	agc										336
Thr	Val		Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu		Thr	Ala	Val		
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Tyr	_	Cys	Ala	Arg	Gly		Arg	Arg	Gly	Gly		Tyr	Phe	Asp	Tyr		
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_	Gly	Gln	Gly	Thr		Val	Thr	Val	Ser								
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Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys			
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Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe.			
	15					20					25							
Thr	Pro	Tyr	$\mathtt{Trp}$	Met	Gln	$\mathtt{Trp}$	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu			
30					35					40					45			
Glu	Trp	Met	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser			
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Gln	Lys	Phe	Lys	Gly	Arg	Val	Thr	Met	Thr	Ala	Asp	Thr	Ser	Ser	Ser			
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Thr	Val	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val		-	
		80					85					90						
Tyr	Tyr	Cys	Ala	Arg	Gly	Leu	Arg	Arg	Gly	Gly	Tyr	Tyr	Phe	Asp	Tyr			
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gct	cac	tcc	cag	gtg	cag	ctg	gtg	cag	tct	ggg	gct	gag	gtg	aag	aag			96
Ala	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys			
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cct	ggg	gcc	tca	gtg	aag	gtt	tcc	tgc	aag	gca	tct	gga	tac	acc	ttc		1	44
Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe			
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Thr	Ala		Met	Glu	Leu	Ser		Leu	Arg	Ser	Glu		Thr	Ala	Val		
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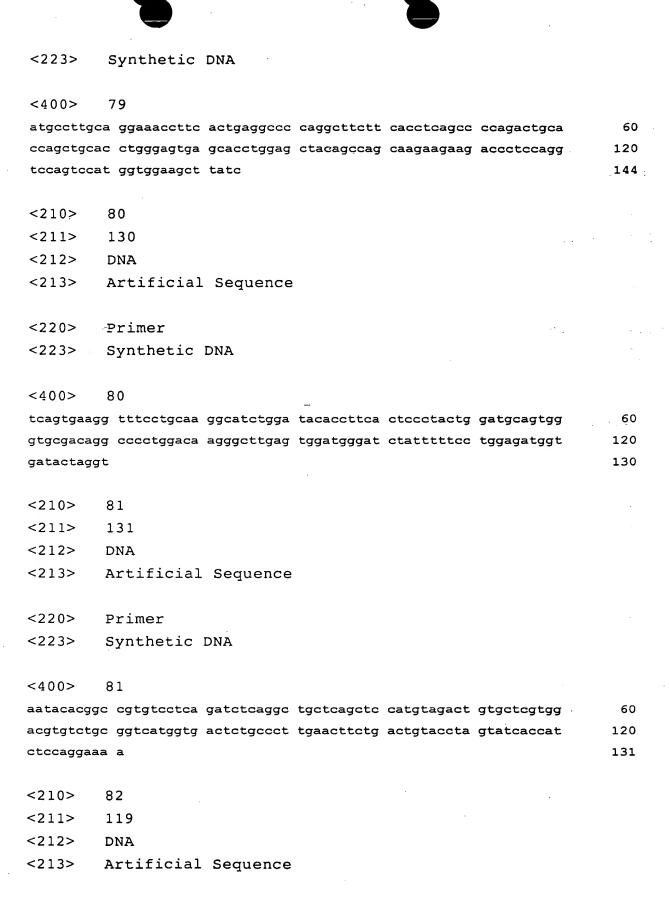
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	_1 1 5	

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15 20 25	





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Gin Lys Phe Lys Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser  65 70 70 75  Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val  80 85 90  Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr  95 100 105  Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser  110 115 120 <a href="#">2210&gt;</a> 99   <211> 418   <220> DNA coding for humanized C chain V region(native/ver sion a mix) of anti-HM1.24 antibody   <223> <a href="#">4400&gt;</a> 99   atg gac tgg acc tgg agg gtc ttc ttc ttg ctg gct gta gct cca ggt 48   Met Asp Trp Thr Trp Arg Val Phe Phe Leu Leu Ala Val Ala Pro Gly  -15 -10 -5   gct cac tcc cag gtg cag ctg gtg cag ttg gag gt gag gt gag aga aga 99   Ala His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys  -1 1 5 10   cct ggg gcc tca gtg aag gtt tcc tc gc aag gca tct gga tac acc ttc 144   Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe  15 20 25   Gct cac tcc tac gag ag gtg gtg gga gag gat acc acg gga tgg atg gag gtg gag gtg gt	Glu	Trp	Ile	Gly	Ser	Ile	Phe	Pro	Gly	Asp	Gly	Asp	Thr	Arg	Tyr	Ser	
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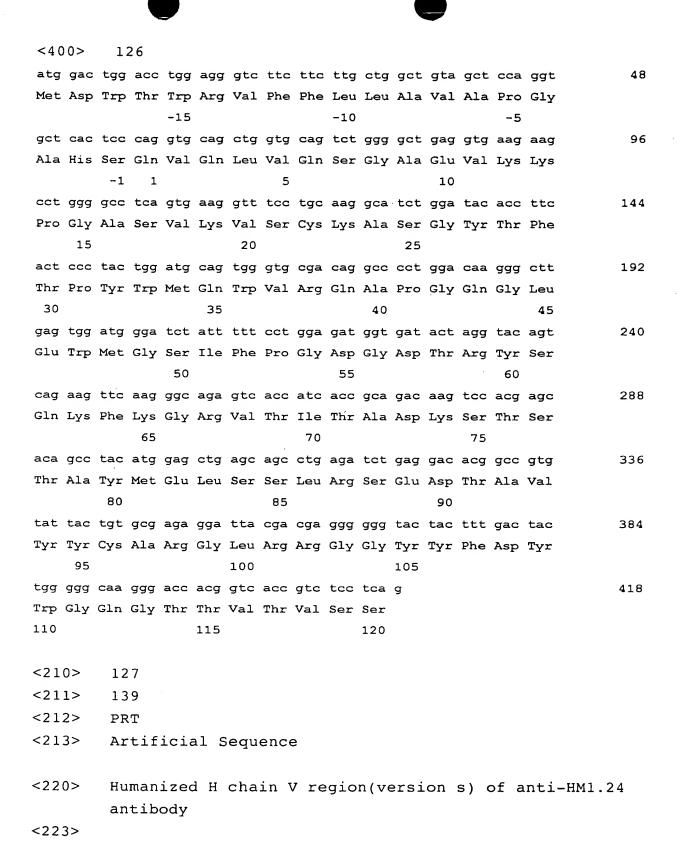
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Asn Val Thr His Leu Leu Gln Gln Glu Leu Thr Glu Ala Gln Lys Gly
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Phe Gln Asp Val Glu Ala Gln Ala Ala Thr Cys Asn His Thr Val Met 85 90 95

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